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10/550,752	09/05/2007	Manuswamy Ramanujam Vijayalakshmi	KNS1.001APC	4327

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EXAMINER

DEES, NIKKI H

ART UNIT	PAPER NUMBER
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1781

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/550,752	Applicant(s) VIJAYALAKSHMI ET AL.	
	Examiner Nikki H. Dees	Art Unit 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 14-17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment filed January 6, 2011, has been entered. Claims 1-11, 14-17, and 19-22 are currently pending in the Application. Claim 18 has been cancelled. The previous objections to the misnumbered claims and claim 2, 9, and 11 have been withdrawn in view of the renumbered claims and the amendments in claims 2, 9, and 11. The previous 112 first paragraph rejection of claims 2-11 has been withdrawn in view of the amendment to claim 2 to reorder steps f and g. The previous 112 second paragraph rejections of claim 1, 2, 11, 14, 17, and 21 have been withdrawn in view of the amendments to claims 1, 2, 11, 14, 17, and 21.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 1781

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 16, 17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGee (McGee, H. 1984. On Food and Cooking. pp. 170-172) in view of Rao (Rao, S.N. 1974. "Anonas the legendary fruit." Indian Horticulture, Agric. Coll. Bapatia, Ap. India. Vol. 19. pp. 19-21) and Dauthy (Dauthy, M.E. 1995. "Fruit and Vegetable Processing." FAO Agricultural Services Bulletin 119, Section 5.3 "Chemical Preservation." Retrieved on Sept. 20, 2010 from <http://www.fao.org/docrep/v5030e/v5030e0d.htm>).

5. Regarding claim 1 McGee teaches a method for making a fruit preserve. McGee notes that fruit is simmered gently to extract pectin. This step would inherently partially dehydrate the mixture of fruit. The sugar, acid and pectin are then added and boiled until concentrated (p. 172). McGee teaches lemon slices as the source of acid. Lemon slices contain citric acid. It is understood by one of ordinary skill that after the mixture is boiled it is cooled, as this is when the pectin gels to form the jam.

6. The addition of sugar to the pulp before cooking and after the pulp has been cooked is considered to be an obvious variation. McGee notes that cooking in sugar syrup helps to maintain the integrity of the fruit, as well as the taste of the product (p.171). One of ordinary skill would have been able to determine when to add sugar to the process in order to provide the desired consistency and taste to the final jam product.

Art Unit: 1781

7. Regarding claim 17, McGee teaches a sugar concentration of 60 to 65% as “generally optimal”. However, one of ordinary skill would have recognized that a slight difference in sugar content as obvious based on the fruit being preserved. Therefore, a claim where the range of sugar content touches the range taught by the prior art are considered to be obvious. McGee further teaches a pectin concentration of 0.5 to 1.0%.

8. Rao teaches jam produced using the custard apple fruit (p. 20 col. 1).

9. It would have been obvious to use a known method for producing jam, as taught by McGee, to produce custard apple jam, as the custard apple is known to be made into jam, as taught by Rao.

10. The combination of McGee and Rao is silent as to the presence of the food preservative sodium benzoate in an amount as claimed.

11. Dauthy teaches sodium benzoate as a common preservative for use in foods including jams (Sec. 5.3.3.1). Commonly used levels range from 0.03 to 0.2 %, overlapping Applicant's claimed range.

12. As sodium benzoate is known as a preservative for use with jams, it would have been obvious to add sodium benzoate to jam in order to provide the jam with increased microbial stability. It is considered obvious to use known compounds (i.e. sodium benzoate) for their intended use (i.e. increased microbial stability) to impart expected characteristics (i.e. said stability) to foodstuffs.

13. Regarding the method of claim 1, from *In re Levin*, 84 USPQ 232 p. 234 “This court has taken the position that new recipes or formulas for cooking food which involve the addition or elimination of common ingredients, or for treating them in ways which

Art Unit: 1781

differ from the former practice, do not amount to invention merely because it is not disclosed that, in the constantly developing art of preparing food, no one else ever did the particular thing upon which the applicant asserts his right to a patent. In all such cases, there is nothing patentable unless the applicant by a proper showing further establishes a coaction or cooperative relationship between the selected ingredients which produces a new, unexpected, and useful function. *In re Benjamin D. White*, 17 C.C.P.A. (Patents) 956, 39 F.2d 974, 5 USPQ 267 ; *In re Mason et al.*, 33 C.C.P.A. (Patents) 1144, 156 F.2d 189, 70 USPQ 221.

14. McGee further notes that methods of making jam are old and vary widely (p. 171). Therefore, as all aspects of the instantly claimed method are known in the prior art, and are used predictably to produce a jam, it is considered obvious to produce a custard apple jam where the fruit is first partially dehydrated, followed by further processing with traditional jam ingredients.

15. As the combination of McGee, Rao and Dauthy teaches a method for making custard apple jam, including components as required by instant claims 16, 17, and 19-22, it is considered inherent that the custard apple jam produced by the combination of McGee, Rao and Dauthy would have the longer shelf life and more favorable organoleptic properties as claimed.

16. Claims 2-11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGee (McGee, H. 1984. On Food and Cooking. pp. 170-172) in view of Rao (Rao, S.N. 1974. "Anonas the legendary fruit." Indian Horticulture, Agric.

Art Unit: 1781

Coll. Bapatia, Ap. India. Vol. 19. pp. 19-21), Braman (Braman, T.F. 1922. "Use of Vacuum Pan for Fruit Products." The American Food Journal. Vol. 17. pp. 9, 10, 26), Francis (Francis, F.J. 2000. Encyclopedia of Food Science and Technology. 2nd Ed. pp. 1149-1153), and Dauthy (Dauthy, M.E. 1995. "Fruit and Vegetable Processing." FAO Agricultural Services Bulletin 119, Section 5.3 "Chemical Preservation." Retrieved on Sept. 20, 2010 from <http://www.fao.org/docrep/v5030e/v5030e0d.htm>).

17. The combination of McGee, Rao, and Dauthy teaches a custard apple jam as applied to claim 1 above.

18. Regarding claim 2 step (e), McGee teaches a sugar concentration of 60 to 65% (i.e. approximately 60°B to 65°B) as "generally optimal". However, one of ordinary skill would have recognized that a slight difference in °B as obvious based on the fruit being preserved. Therefore, claims where °B varies by only a few degrees over the teachings of the prior art are considered to be obvious.

19. Regarding claim 2 step (f), Dauthy teaches sodium benzoate as a common preservative for use in foods including jams (Sec. 5.3.3.1). Commonly used levels range from 0.03 to 0.2 % (300 ppm to 2000 ppm), near to Applicant's claimed range. The determination of the acceptable amount of sodium benzoate to achieve the desired microbial stability would have been routine to one of ordinary skill in order to minimize the amount of preservatives present in the jam, while maximizing the microbial stability of the jam.

20. Regarding claim 10, McGee teaches lemon slices as the source of acid. Lemon slices contain citric acid.

Art Unit: 1781

21. Regarding claim 11, McGee teaches sugar concentration after the mixture has been boiled, a pectin concentration of 0.5 to 1.0% and the pH of the mixture.

22. McGee is silent as to jam being produced from custard apple.

23. Rao teaches custard apple jam as a means for preserving custard apple. Rao notes that the production has been attempted “with success” (p. 20 col. 1).

24. Regarding claim 3, Francis teaches that fruits used to produce jams should be fresh and ripe (p. 1149, col. 1).

25. Regarding claim 4, the prior art does not speak to the method of obtaining the pulp. However, as Rao speaks to the edible nature of the pulp (p. 19), it would have been obvious to one of ordinary skill to utilize said pulp for the production of the jam. The method of removing the pulp, using a pulper or otherwise, would not have been expected to materially alter the outcome of the jam absent convincing arguments or evidence to the contrary. Further, the removal of seeds from the pulp is considered to be obvious, as it is common to remove seeds from fruits to be made into jams in order to provide the jam with an organoleptically acceptable texture.

26. The combination of McGee, Dauthy, and Rao is silent as to dehydrating the pulp under vacuum.

27. Braman teaches the use of vacuum in the preparation of jam products. It is noted that cooking under vacuum helps to preserve fruit flavor and color (p. 26, col. 2). Braman does not teach specific temperatures and pressures as required by claim 2 step (c) or claim 6. However, as Braman speaks to the improved attributes of jam processed at least partially under vacuum, it would have been obvious for one of ordinary skill to

Art Unit: 1781

incorporate a vacuum step in a jam making process in order to improve the flavor and color of the jam.

28. From *In re Levin*, 84 USPQ 232 p. 234 "This court has taken the position that new recipes or formulas for cooking food which involve the addition or elimination of common ingredients, or for treating them in ways which differ from the former practice, do not amount to invention merely because it is not disclosed that, in the constantly developing art of preparing food, no one else ever did the particular thing upon which the applicant asserts his right to a patent. In all such cases, there is nothing patentable unless the applicant by a proper showing further establishes a coaction or cooperative relationship between the selected ingredients which produces a new, unexpected, and useful function. *In re Benjamin D. White*, 17 C.C.P.A. (Patents) 956, 39 F.2d 974, 5 USPQ 267 ; *In re Mason et al.*, 33 C.C.P.A. (Patents) 1144, 156 F.2d 189, 70 USPQ 221.

29. McGee further notes that methods of making jam are old and vary widely (p. 171). Therefore, as all aspects of the instantly claimed method are known in the prior art, and are used predictably to produce a jam, it is considered obvious to produce a custard apple jam where the fruit is first partially dehydrated, followed by further processing with traditional jam ingredients.

Response to Arguments

30. Applicant's arguments filed January 6, 2011, have been fully considered but they are not persuasive.

31. Applicant argues that there is no reason for a person of ordinary skill to modify the teachings of McGee to make a jam from custard apple (Remarks, p. 8).

32. This argument is not persuasive. McGee specifically states that methods of making jam are old and vary widely. Therefore, it cannot be said that there is only one way to make jam, and only one way to modify the prior process to provide an "improvement" over the prior art process.

33. McGee teaches two cooking steps. The initial one comprises gently cooking the fruit, aligned with instant step (b). Then the sweetener, setting agent and acid are added, boiled, and subsequently cooled. Therefore, the only modification required of McGee is the initial sweetening agent to mix with the custard apple pulp. As it is known to make a "successful" custard apple jam, as taught by Rao, the order of performing the specific steps is considered to be obvious in the absence of convincing arguments or evidence of unexpected results. As Applicant does not provide the process by which the alleged inferior custard apple jam is produced, and McGee states that there are many different processes by which jams and jellies are produced, it cannot be said that the presently claimed process provides unexpected results over an unreported process.

Art Unit: 1781

34. Applicant argues that the novelty in the instant invention further includes the extended shelf life due to partial dehydration of the mixture of the pulp and sweetening agent (Remarks, p. 9).

35. Applicant has not presented any convincing evidence that this partial dehydration step is responsible for the "extended" shelf life. Indeed, there is no data presented regarding shelf life or flavor of the "conventional" custard apple jam compared to custard apple jam of the instant invention. The examiner also notes that the production of jam itself, to provide a product comprising high amounts of sugar and a low pH, inherently lends itself to an "extended" shelf life of jams as the high sugar content and low pH is not conducive to bacterial growth. As McGee noted, the production of jam is an old and well known way to preserve fruits. The addition of a known food preservative in the form of sodium benzoate would be expected to further extend this shelf life.

Conclusion

36. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1781

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikki H. Dees whose telephone number is (571)270-3435. The examiner can normally be reached on Monday-Thursday 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. H. D./

Nikki H. Dees
Examiner
Art Unit 1781

/Keith D. Hendricks/
Supervisory Patent Examiner, Art Unit 1781